

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/539,911
Applicants : Dietschi et al.
Filed : June 16, 2005
Title : FLUID COOLING SYSTEM,
COOLED FLUID DISPENSER
COMPRISING THE LATER, AND
METHODS FOR STERILIZATION
THEREOF

TC/A.U. : 3744
Examiner : Tapolcai, William E.
Conf. No. : 8413
Docket No. : 1325-5 PCT/US
Dated : March 31, 2009

BOX AF

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SECOND AMENDMENT AFTER FINAL OFFICE ACTION

Sir:

In response to the Advisory Action dated March 25, 2009, please amend the
application in accordance with 37 C.F.R. §1.121, as follows:

Amendments to the Claims are reflected in the listing of the claims which begin on page 2
of this paper.

Remarks/Arguments begin on page 10 of this paper.

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4/2/2009

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LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)
2. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the primary and secondary heat exchanger system chambers are arranged substantially one inside of another.
3. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the primary heat exchanger system chamber is arranged at least partially within the secondary heat exchanger system chamber.
4. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the primary heat exchanger system chamber is arranged substantially within the secondary heat exchanger system chamber.
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Currently Amended) A fluid cooling system according to claim 18 ~~4~~, wherein the chamber of the primary heat exchanger system has an outlet for the heat transfer agent which communicates with the chamber of the secondary heat exchanger system.
9. (Previously Presented) A fluid cooling system, for use in dispensing or distributing a chilled or cooled fluid, comprising a primary heat exchanger system, a secondary heat exchanger system, a first conduit through which fluid to be cooled or chilled is circulated, and a heat transfer agent for transferring cooling energy to the fluid to be chilled

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circulating in the first conduit, wherein the primary and secondary heat exchanger systems are arranged at least partially one inside of another, and wherein the primary heat exchanger system comprises a chamber located substantially within a chamber of the secondary heat exchanger system, and wherein the chamber of the primary heat exchanger system has an outlet for the heat transfer agent which communicates with the chamber of the secondary heat exchanger system, and wherein the outlet of the chamber of the primary heat exchanger system is located in a wall of said chamber that is in contact with the chamber of the secondary heat exchanger system.

10. (Currently Amended) A fluid cooling system according to claim 9 &, wherein the primary heat exchanger system also comprises a coil that effects cooling thermal exchange with the heat transfer agent in the chamber of said primary heat exchanger system.

11. (Currently Amended) A fluid cooling system according to claim 9 †, wherein the primary heat exchanger system also comprises a thermostat.

12. (Previously Presented) A fluid cooling system, for use in dispensing or distributing a chilled or cooled fluid, comprising a primary heat exchanger system, a secondary heat exchanger system, a first conduit through which fluid to be cooled or chilled is circulated, and a heat transfer agent for transferring cooling energy to the fluid to be chilled circulating in the first conduit, wherein the primary and secondary heat exchanger systems are arranged at least partially one inside of another, and wherein the primary heat exchanger system comprises a chamber located substantially within a chamber of the secondary heat exchanger system, and wherein the chamber of the primary heat exchanger system has an outlet for the heat transfer agent which communicates with the chamber of the secondary heat exchanger system, and wherein the heat transfer agent circulates from the primary heat exchanger system to the secondary heat exchanger system via the outlet in a wall of the chamber of the primary heat exchanger system.

13. (Currently Amended) A fluid cooling system according to claim 9 †, wherein the first conduit carrying the fluid to be cooled is located within the chamber of the secondary heat exchanger system.

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14. (Currently Amended) A fluid cooling system according to claim 9 \pm , wherein the first conduit carrying the fluid to be cooled is arranged as a coil around a peripheral wall of the chamber of the primary heat exchanger system.

15. (Previously Presented) A fluid cooling system, for use in dispensing or distributing a chilled or cooled fluid, comprising a primary heat exchanger system, a secondary heat exchanger system, a first conduit through which fluid to be cooled or chilled is circulated, and a heat transfer agent for transferring cooling energy to the fluid to be chilled circulating in the first conduit, wherein the primary and secondary heat exchanger systems are arranged at least partially one inside of another, and wherein the primary heat exchanger system comprises a chamber located substantially within a chamber of the secondary heat exchanger system, and wherein the chamber of the primary heat exchanger system has an outlet for the heat transfer agent which communicates with the chamber of the secondary heat exchanger system, and wherein cooled heat transfer agent exiting via the outlet into the chamber of the secondary heat exchanger system flows into said chamber at one end of said chamber, over a peripheral surface of the first conduit, and out via an outlet in a wall of the chamber at another end of the chamber of the secondary heat exchange system.

16. (Currently Amended) A fluid cooling system according to claim 9 \pm , wherein the fluid cooling system also comprises a reservoir for the heat transfer agent, located adjacent to the chamber of the secondary heat exchanger system.

17. (Original) A fluid cooling system according to claim 16, wherein the reservoir is located above the chamber of the secondary heat exchanger system.

18. (Previously Presented) A fluid cooling system, for use in dispensing or distributing a chilled or cooled fluid, comprising a primary heat exchanger system, a secondary heat exchanger system, a first conduit through which fluid to be cooled or chilled is circulated, and a heat transfer agent for transferring cooling energy to the fluid to be chilled circulating in the first conduit, wherein the primary and secondary heat exchanger systems are arranged at least partially one inside of another, and wherein the secondary heat

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exchanger system comprises a chamber, and wherein the fluid cooling system also comprises a reservoir for the heat transfer agent, located adjacent to the chamber of the secondary heat exchanger system, and wherein the reservoir comprises a plug comprising an excess pressure-venting membrane.

19. (Original) A fluid cooling system according to claim 16, wherein the reservoir is connected to the outlet of the chamber of the secondary heat exchanger system via a pump.

20. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the secondary heat exchanger system also comprises a pump for circulating heat transfer agent.

21. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the primary heat exchanger system is arranged at least partially around the secondary heat exchanger system.

22. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the primary heat exchanger system is arranged substantially around the secondary heat exchanger system.

Claims 23-36 (Canceled)

37. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the fluid to be cooled is a liquid.

38. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the fluid is a liquid and comprises non-alcoholic beverages, such as fruit juice, water, drinking water, and alcoholic beverages, such as beer, wine, and spirit liquors.

39. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the fluid to be cooled is a gas.

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40. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the fluid is a gas and comprises air, oxygen, nitrogen, helium, hydrogen, nitrous oxide.

41. (Currently Amended) A fluid cooling system according to claim 9 ~~4~~, wherein the first conduit is sterilized periodically.

42. (Currently Amended) A cooled fluid dispenser comprising a source of fluid to be cooled and dispensed, and at least one dispenser tap, wherein the dispenser incorporates a fluid cooling system according to claim 9 ~~4~~.

43. (Original) A cooled fluid dispenser according to claim 42, wherein the dispenser further comprises another dispensing tap connected to the source of fluid independently from said fluid cooling system.

44. (Original) A cooled fluid dispenser according to claim 42, wherein the source of fluid to be cooled and dispensed is removable.

45. (Original) A cooled fluid dispenser according to claim 42, wherein the removable source of fluid is selected from the group consisting of a pressurized or non-pressurized bottle, canister, and tank.

Claims 46-54 (Canceled)

55. (New) A fluid cooling system according to claim 12, wherein the primary and secondary heat exchanger system chambers are arranged substantially one inside of another.

56. (New) A fluid cooling system according to claim 12, wherein the primary heat exchanger system chamber is arranged at least partially within the secondary heat exchanger system chamber.

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57. (New) A fluid cooling system according to claim 12, wherein the primary heat exchanger system chamber is arranged substantially within the secondary heat exchanger system chamber.

58. (New) A fluid cooling system according to claim 12, wherein the primary heat exchanger system also comprises a coil that effects cooling thermal exchange with the heat transfer agent in the chamber of said primary heat exchanger system.

59. (New) A fluid cooling system according to claim 12, wherein the primary heat exchanger system also comprises a thermostat.

60. (New) A fluid cooling system according to claim 12, wherein the first conduit carrying the fluid to be cooled is located within the chamber of the secondary heat exchanger system.

61. (New) A fluid cooling system according to claim 12, wherein the first conduit carrying the fluid to be cooled is arranged as a coil around a peripheral wall of the chamber of the primary heat exchanger system.

62. (New) A fluid cooling system according to claim 12, wherein the fluid cooling system also comprises a reservoir for the heat transfer agent, located adjacent to the chamber of the secondary heat exchanger system.

63. (New) A fluid cooling system according to claim 62, wherein the reservoir is located above the chamber of the secondary heat exchanger system.

64. (New) A fluid cooling system according to claim 62, wherein the reservoir is connected to the outlet of the chamber of the secondary heat exchanger system via a pump.

65. (New) A fluid cooling system according to claim 12, wherein the secondary heat exchanger system also comprises a pump for circulating heat transfer agent.

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66. (New) A fluid cooling system according to claim 12, wherein the primary heat exchanger system is arranged at least partially around the secondary heat exchanger system.

67. (New) A fluid cooling system according to claim 12, wherein the primary heat exchanger system is arranged substantially around the secondary heat exchanger system.

68. (New) A fluid cooling system according to claim 12, wherein the fluid is a liquid and comprises non-alcoholic beverages, such as fruit juice, water, drinking water, and alcoholic beverages, such as beer, wine, and spirit liquors.

69. (New) A fluid cooling system according to claim 12, wherein the fluid to be cooled is a gas.

70. (New) A fluid cooling system according to claim 12, wherein the fluid is a gas and comprises air, oxygen, nitrogen, helium, hydrogen, nitrous oxide.

71. (New) A fluid cooling system according to claim 12, wherein the first conduit is sterilized periodically.

72. (New) A cooled fluid dispenser comprising a source of fluid to be cooled and dispensed, and at least one dispenser tap, wherein the dispenser incorporates a fluid cooling system according to claim 12.

73. (New) A cooled fluid dispenser according to claim 72, wherein the dispenser further comprises another dispensing tap connected to the source of fluid independently from said fluid cooling system.

74. (New) A cooled fluid dispenser according to claim 72, wherein the source of fluid to be cooled and dispensed is removable.

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75. (New) A cooled fluid dispenser according to claim 72, wherein the removable source of fluid is selected from the group consisting of a pressurized or non-pressurized bottle, canister, and tank.

76. (New) A fluid cooling system according to claim 18, wherein the primary and secondary heat exchanger system chambers are arranged substantially one inside of another.

77. (New) A fluid cooling system according to claim 18, wherein the primary heat exchanger system chamber is arranged at least partially within the secondary heat exchanger system chamber.

78. (New) A fluid cooling system according to claim 18, wherein the primary heat exchanger system chamber is arranged substantially within the secondary heat exchanger system chamber.

79. (New) A fluid cooling system according to claim 18, wherein the primary heat exchanger system also comprises a coil that effects cooling thermal exchange with the heat transfer agent in the chamber of said primary heat exchanger system.

80. (New) A fluid cooling system according to claim 18, wherein the primary heat exchanger system also comprises a thermostat.

81. (New) A fluid cooling system according to claim 18, wherein the first conduit carrying the fluid to be cooled is located within the chamber of the secondary heat exchanger system.

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REMARKS/ARGUMENTS

In response to the Advisory Action, Applicants have canceled rejected Claim 1 and withdrawn Claims 23-36. Applicants have amended all of the remaining dependent claims to now depend from one of the allowed Claims 9, 12, 15 or 18. Applicants have also added new dependent Claims 55-82, which all depend from one of the allowed Claims 12 or 18. Accordingly, it is believed that the application with Claims 2-4, 8-22, 37-45 and 55-81 is now in condition for allowance.

In view of the foregoing amendment and remarks, favorable consideration and allowance of the application with Claims 2-4, 8-22, 37-45 and 55-81 are respectfully solicited. If the Examiner believes that a telephone interview would assist in moving the application toward allowance, he is respectfully invited to contact the Applicants' attorney at the telephone number listed below.

Respectfully submitted,

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